



Country: Portugal

Opportunities for Electric Vehicles, Parts and Systems

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Country Overview

Country Demographics:

- Size of Country: 35,316 (sq miles land)
- GDP per Capita: \$21,800
- Population: 10.7 million
- Population concentration: 59% Urban
- Commute needs: Except in large urban areas, commuting is not very frequent; public transportation prevails over individual transportation



Energy Consumption:

- Dependence of foreign oil: 83.1% (2007)
- Status of electrical generation and transmission:
In 2008, the country generated 45.9 TWh of electricity and consumed 49.1 TWh.
- Amount of alternative energy produced in country: Installed Capacity reached 9.294 MW in May 2010. Electricity Produced in 2008 reached 15.4 TWh.
- General concern with environmental issues: Battery Disposal and Recycle

Transportation Overview:

- Motorization: 2.4 passengers vehicles per capita (2008)
- Status of mass transit: Lisbon and Porto Metropolitan areas are well developed. All other major cities and towns have a local urban transport network. Taxi services are also available.
- Status of local auto industry: Supportive. Portuguese Electric Vehicle Association created in 1999.
- Government incentives to encourage purchase/use of no-emission vehicles: Yes
- Active companies in the electric automobile area: EDP, Siemens, Nissan/Renault, Galp, Toyota Caerano Portugal, among others.

On a scale of 1 to 4 how would you rate your country: 3

1. Little to no probability of success for U.S. Exporters
2. There are more challenges than opportunities for U.S. exporters
3. There are more opportunities than challenges for U.S. exporters
4. Very high probability of success for U.S. exporters

General Overview

The Portuguese government has been taking measures over the last couple of years to reduce its dependency on foreign energy and promote the local production of energy using clean energy. As a result by the end of 2010, Portugal may be producing nearly 45 percent of its electricity from renewable sources, a 28 percent growth compared to 2005.

Another important step to free Portugal from foreign energy imports is promoting green transport by developing the necessary infrastructure to supply and charge electrical vehicles and adopted any government incentives to encourage the purchase and usage of green vehicles in Portugal.

According to government officials, the sale of electrical vehicles should grow over the next decade, where it is estimated to reach 800.000 vehicles or 10 percent of electrical cars by 2020. This cluster, which includes the sale of energy to power electrical vehicles, charging stations, energy management systems and the manufacture of charging units, should represent a total value of \$1 billion by 2020.

Toyota, Nissan, Renault and Mitsubishi plan to have electric vehicles available on the Portuguese market by the end of 2010. The estimated sale prices are between \$32,000 and \$104,000.

Other public and private entities have been pro-actively promoting the wider use of electrical vehicles as whether fully electric, hybrid or using fuel cell systems such as the case of Portuguese Association of Electric Vehicle (APVE). The members of APVE include companies such as EDP, EFACEC, Siemens, Honda Portugal, FIAT, Citroen, as well as small and medium size companies.

Opportunities

Portugal is committed to becoming the first country to inaugurate a national network of charging stations for electrical vehicles. This will offer manufacturers a guarantee that customers will have a recharging network, allowing them to invest safely in mass production sales of battery-powered vehicles. However, the government and power companies have been cautiously investing in the networks since there are no cars on the market yet.

In order to achieve this goal, in early 2009, the Portuguese Electric Mobility Program called “Mobi-E” was created. This program will include charging stations accessible to all electric

vehicle brands. The network will have normal charging points which will be able to charge an electric vehicle in 6 to 8 hours, using wind energy produced during the night, as well as rapid charging points which will charge an electric vehicle in less than 30 minutes. Portugal plans to have over 1300 charging stations by the end of 2011. The stations will be installed throughout Portugal, in places such as public car parks, shopping centers, hotels, airports and gas stations. Electric vehicle users will require only an identification card to access the network, regardless of the charging station location, providing a quick and seamless experience.

According to industry experts, the recharging market could be worth up to \$2.8 billion by 2020 with more than 25,000 recharging stations installed across Portugal.

The Portuguese government has also created incentives to encourage the purchase and use of zero-emission vehicles by giving tax breaks to individuals and companies that switch to electric vehicles by 2015. Additional measures are currently being discussed.

In addition, Renault-Nissan recently announced that Portugal will be the first country to manufacture lithium-ion batteries for electrical cars. The plant located in Cacia, Aveiro will produce 50 thousand units per year starting 2012, of which 95% will be for export, mostly with Europe. The \$355 million plant will create over 200 jobs. According to Renault-Nissan officials, the Portuguese plant will be a major global supplier of batteries.

The charging stations network, the Renault-Nissan plant, as well as other ongoing activities may offer good supply-chain opportunities for U.S. technology and service exporters.

U.S. exporters are advised to work with a local partner. This is considered to be the quickest and best way to enter the Portuguese market. Interested U.S. exporters will have to focus on innovation, quality and competitive pricing, despite the transportation costs they may encounter.

Resources

Portuguese Electric Mobility Program - Mobi.E: <http://mobi-e.pt/Pages/Default.aspx>

Portuguese Association of Electric Vehicle - APVE: <http://www.apve.pt>

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